MECHANICAL DATA

Bulb	T-6 ½
Base	E9-1, Small Button, 9-Pin
Outline	6-3
Basing	9EF
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6CS7	8CS7	
Heater Voltage	6.3	8.4 Volts	
Heater Current	600	450 Ma	
Heater Warm-up Time[1]	11	11 Seconds	
Heater-Cathode Voltage (Design Center Values)			
Heater Negative with Respect to Cathode			
Total DC and Peak	200	200 Volts	Max.
Heater Positive with Respect to Cathode			
DC	100	100 Volts	Max.
Total DC and Peak	200	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1[2]	Section 2
Grid to Plate	2.6	2.6 μμf
Input: g to (k+h+ I.S.)	1.8	3.0 μμf
Output: p to (k+h+ I.S.)	0.5	0.5 μμf

RATINGS (Design Center Values—Except as Noted)

Vertical Deflection Oscillator and Amplifier[3]

	Section 1[2] (Oscillator)	Section 2 (Amplifier)	
DC Plate Voltage	500	500 Volts	Max.
Peak Positive Pulse Plate Voltage (Abs. Max.)		2200 Volts	
Plate Dissipation[4]	1.25	6.5 Watts	Max.
Peak Negative Pulse Grid Voltage	400	250 Volts	Max.
Average Cathode Current	20	30 Ma	Max.
Peak Cathode Current	70	105 Ma	Max.
Grid Circuit Resistance	2.2	2.2 Megohm.	Max.

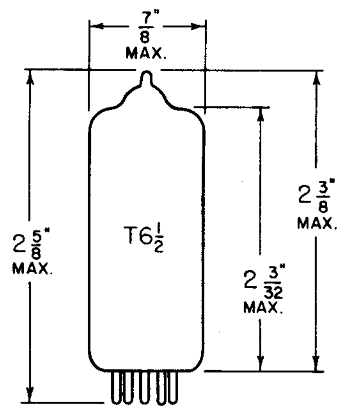
CHARACTERISTICS AND TYPICAL OPERATION

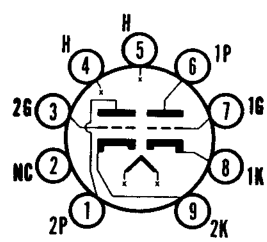
	Section 1[2]	Section 2
Plate Voltage	250	250 Volts
Grid Voltage	-8.5	-10.5 Volts
Plate Current	10.5	19.0 Ma
Transconductance	2200	4500 μmhos
Amplification Factor	17.0	15.5
Plate Resistance	7700	3450 Ohms
Plate Current at Ec = -16 Volts		3.0 Ma
Grid Voltage for Ib = 10 μa	-24	Volts
Grid Voltage for Ib = 50 μa		-22 Volts

QUICK REFERENCE DATA

The Sylvania Types 6CS7 and 8CS7 are miniature double triodes having dissimilar sections. Section No. 1 is intended for operation as a vertical deflection oscillator and Section No. 2 as a vertical deflection amplifier.

Types 6CS7 and 8CS7 have controlled heater warm-up time for series string operation.





9EF

SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

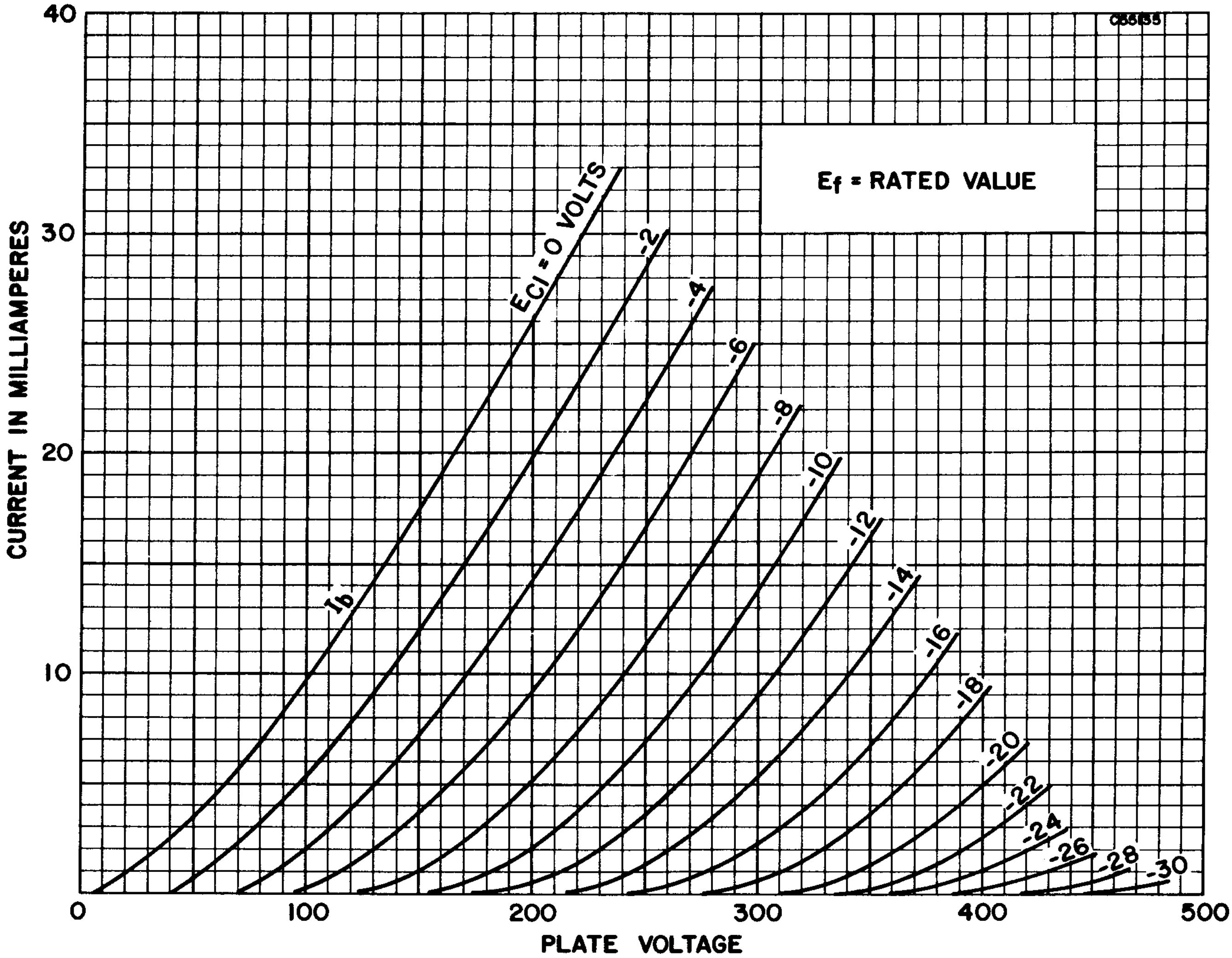
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FEBRUARY, 1957

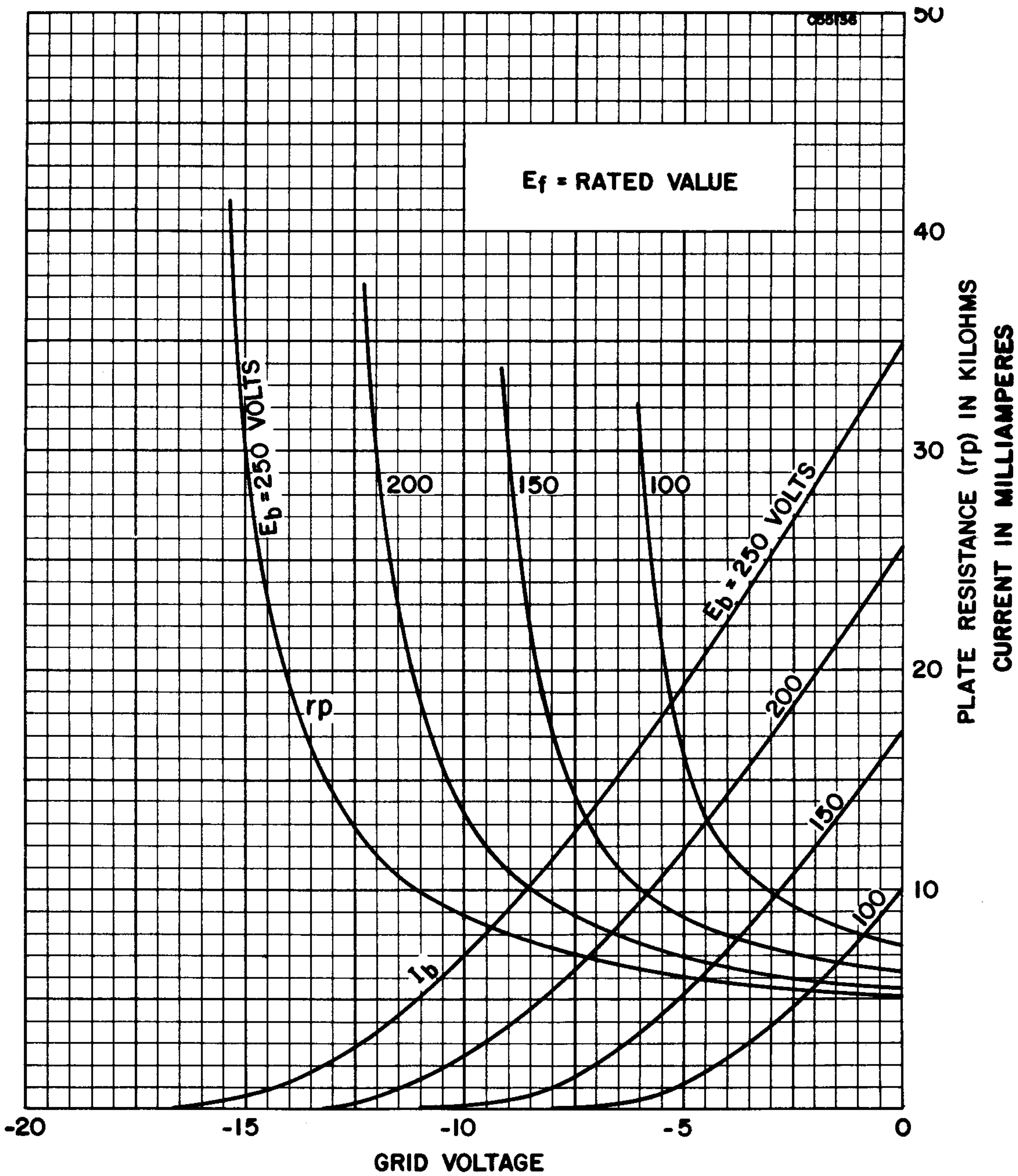
NOTES:

1. *Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.*
2. *Section 1 connects to pins 6, 7 and 8. Section 2 connects to pins 1, 3 and 9.*
3. *For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.*
4. *In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.*

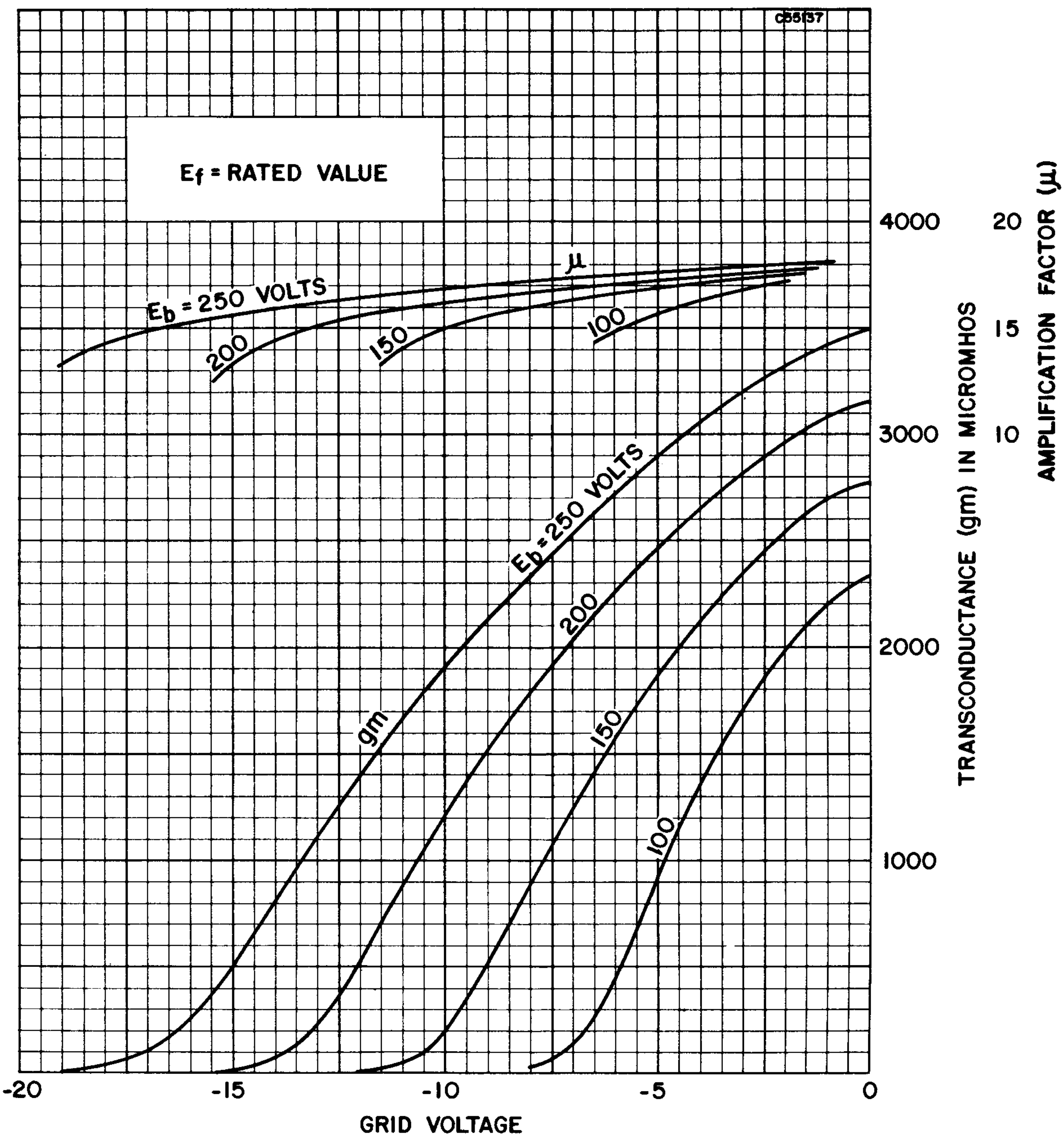
AVERAGE PLATE CHARACTERISTICS
(SECTION No. 1)



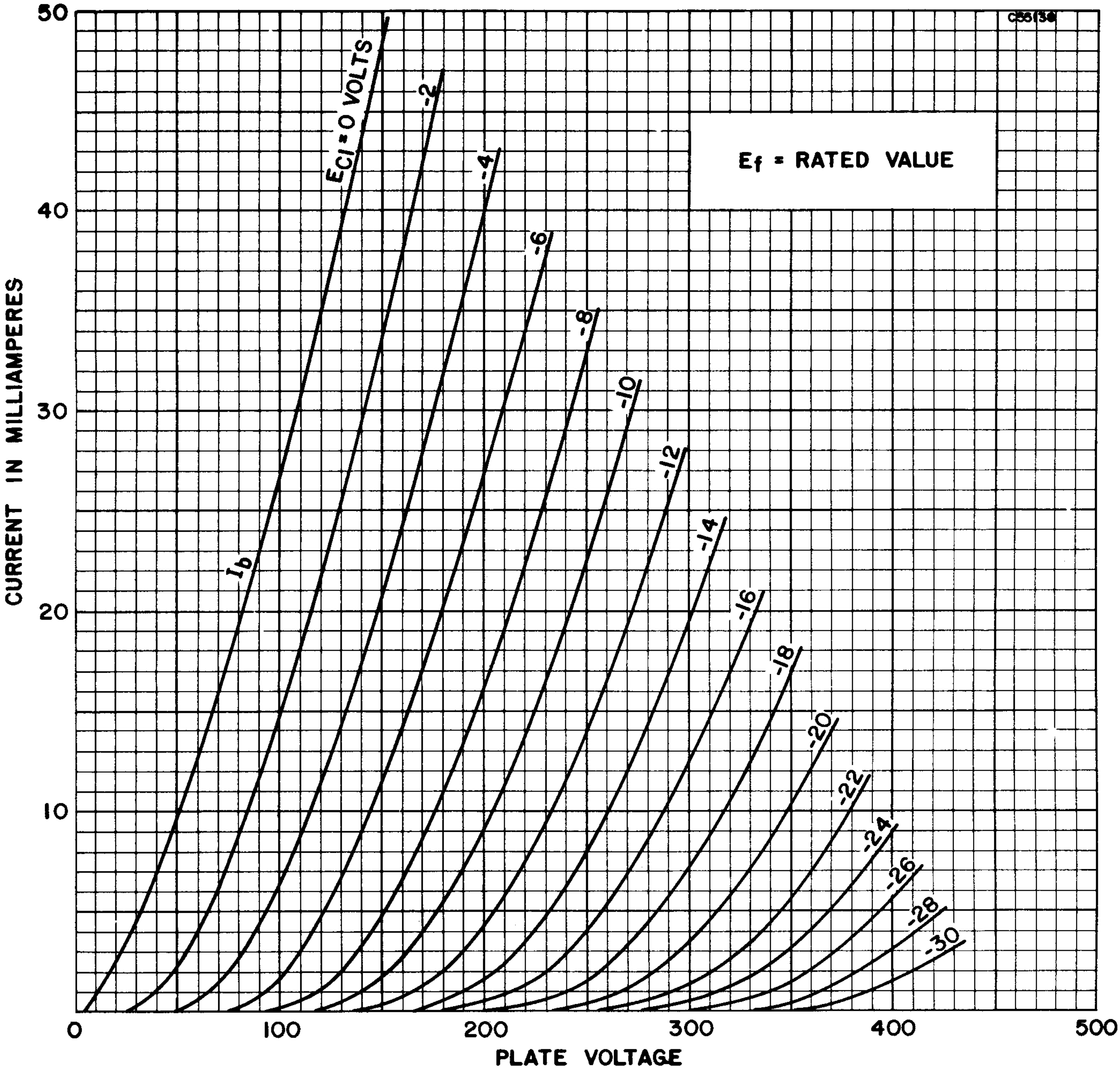
AVERAGE TRANSFER CHARACTERISTICS
(SECTION No. 1)



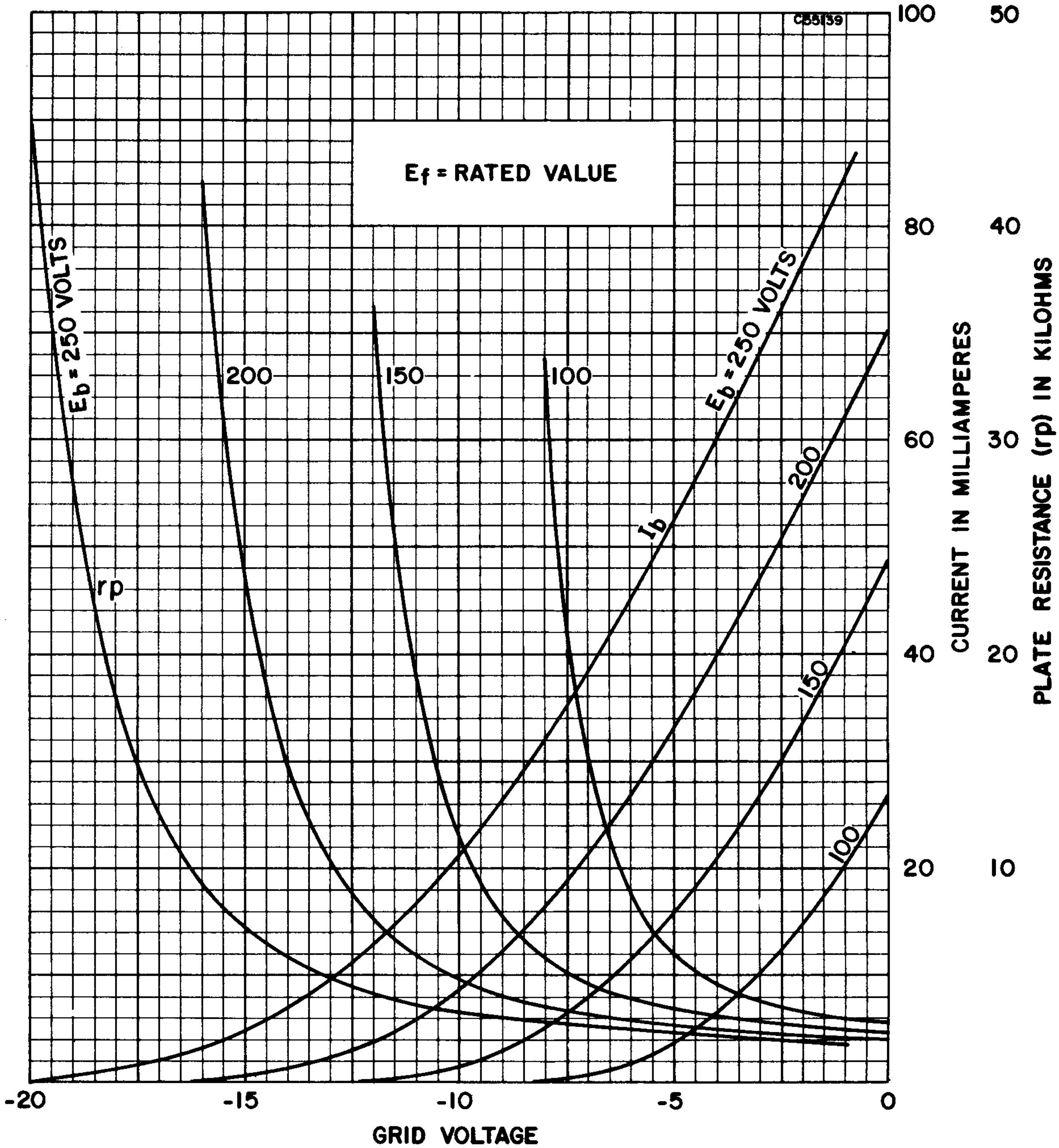
AVERAGE TRANSFER CHARACTERISTICS
(SECTION No. 1)



AVERAGE PLATE CHARACTERISTICS
(SECTION No. 2)



AVERAGE TRANSFER CHARACTERISTICS
(SECTION No. 2)



AVERAGE TRANSFER CHARACTERISTICS
(SECTION No. 2)

